

ABSTRACT OF THE DISCLOSURE

A capacitively coupled microelectromechanical device and method of operation. The micromechanical device comprises: a semiconductor substrate; a member operable to deflect about a torsion axis to either of at least two states; and a switch driven for selectively connecting the member to a voltage signal. When a logic high signal is stored on the memory capacitor 308, the mirror transistor 310 is turned on, grounding the mirror structure 312. When a logic low signal is stored on the memory capacitor 308, the mirror transistor 310 is turned off, allowing the mirror to float electrically. Mirrors that are tied to a voltage potential, which typically are grounded, are affected by a reset pulse and rotate away from their landed position. When the mirrors have rotated to the opposite side, a bias signal is applied to hold the repositioned mirror in place in the opposite state. Mirrors that electrically are floating do not experience the forces generated by the reset voltage and remain in their previous state. The preceding abstract is submitted with the understanding that it only will be used to assist in determining, from a cursory inspection, the nature and gist of the technical disclosure as described in 37 C.F.R. § 1.72(b). In no case should this abstract be used for interpreting the scope of any patent claims.